



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,580	08/26/2003	George A. Dunn	16869G-084700US	5971

20350 7590 10/03/2005

TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER

NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
----------	--------------

2651

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/649,580

Applicant(s)

DUNN, GEORGE A.

Examiner

Daniell L. Negrón

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-23 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,8,9,11,13,15,16 and 18 is/are rejected.
- 7) ☒ Claim(s) 3,5,7,10,12,14,17,19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Request for Continued Examination (RCE)*

Examiner acknowledges the request for continued examination filed on September 2, 2005.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 6, 8, 11, 13, 15, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Christiansen et al U.S. Patent No. 6,369,969.

Regarding claims 1, 4, 6, 8, 11, 13, 15, 16, and 18, the rejections applied to the claims in the previous Office action mailed December 3, 2004 are herein repeated for the same reasons.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christiansen et al U.S. Patent No. 6,369,969

Regarding claims 2 and 9, the rejections applied to the claims in the previous Office action mailed December 3, 2004 are herein repeated for the same reasons.

***Allowable Subject Matter***

5. Claims 3, 5, 7, 10, 12, 14, 17, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments and amendment to the claims, see response, filed September 2, 2005, with respect to rejection of claims 1, 8, and 15 under 35 USC 112, 1<sup>st</sup> paragraph have been fully considered and are persuasive. The rejection of claims 1, 8, and 15 under 35 USC 112 has been withdrawn.

7. Applicant's arguments filed September 2, 2005 regarding rejection of claims 1, 2, 4, 6, 8, 9, 11, 13, 15, 16, and 18 have been fully considered but they are not persuasive. In the response to the final Office action mailed July 12, 2005 applicant argues that Christiansen et al U.S. Patent No. 6,369,969 fail to show directional patterns stored in a "previously unused area of the data track preceding a servo region", the Examiner however respectfully disagrees. Christiansen et al disclose a sync mark (10) which generates a direction (i.e., polarity) signal. The direction signal is used to detect whether a read/write head has reversed polarity (column 3, lines 12-26 and column 5, lines 1-13). The sync mark is shown in Fig. 1 as being in a data section of a track (column 1, lines 19-22) and preceding a servo region comprising servo data (12) and servo bursts (14). It is considered that any area where a pattern is written was at some point previously blank or unrecorded, or unused for the current purpose. Therefore it is considered that the reference meets the limitations of Applicant's invention as claimed.

*Allowable Subject Matter*

8. Claims 21-23 are allowed.

9. The following is an examiner's statement of reasons for allowance:

Regarding claim 21, claim 21 teaches an apparatus for detecting polarity reversals in a read/write head of a disk drive system, wherein comparing circuitry for determining if a decoded signal matches a first pattern that indicates whether the read/write head have reversed polarity, and wherein a tolerance between the first pattern and a second pattern is 8 bits, which is neither taught or an obvious variation of the prior art.

Regarding claim 22, claim 22 teaches an apparatus for detecting polarity reversals in a read/write head of a disk drive system, wherein comparing circuitry for determining if a decoded signal matches a first pattern that indicates whether the read/write head have reversed polarity, and wherein the first pattern is 11011, which is neither taught or an obvious variation of the prior art.

Regarding claim 23, claim 23 teaches an apparatus for detecting polarity reversals in a read/write head of a disk drive system, comprising decoder circuitry for decoding the read signal and comparing the decoded read signal to a pattern to determine if the read/write head has reversed polarity, includes a plurality of AND gates that compare the decoded read signal to the pattern to determine whether the read/write head has reversed polarity, and further including a shift register coupled to the AND gates, which is neither taught or an obvious variation of the prior art.

Art Unit: 2651

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Prior Art***

Tomita et al U.S. Patent No. 6,295,175 is cited as of interest for disclosure of correcting polarity reversal in a disk drive.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN   
September 21, 2005

  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600